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Mission command technologies providing Web-based simplicity

By Kathryn Bailey

When the Army instituted the Mission Command doctrine in 2011, it did so to hold the commander and Soldier accountable for achieving mission goals through a shared understanding of the operational environment.

This philosophical shift is empowering leadership from the edge. It requires technological solutions incorporating all warfighting functions of maneuver, fires, sustainment, airspace management and air defense.

With Capability Set 13, the Army is converging existing software capabilities and introducing enhanced, web-based capabilities that create the synergy necessary for the commander's decision making abilities and mission execution.

"The mission command capabilities that are part of CS 13 provide a simplified, unified package to help commanders and their staff collaborate for success," said COL Jonas Vogelhut, project manager for Mission Command.

One of the biggest challenges facing the commander in today's command post is the requirement to mentally fuse multiple data sources displayed on separate viewers to achieve a unified battle space picture. To ease this burden, PM MC began converging logistics, fires, air defense and airspace product lines in 2010 by creating an enhanced version of Command Post of the Future, the situational awareness system that processes and displays combat information onto digital maps from other Army systems.

PM MC continues to enhance

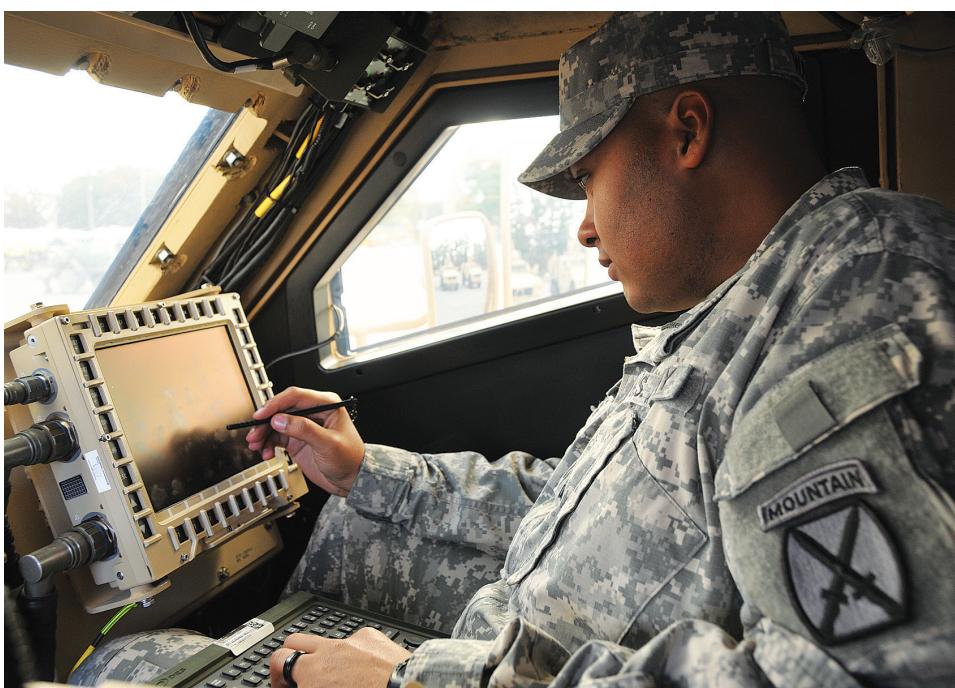
CPOF with CS 13 through improved 3-D map capabilities, upgraded automatic process flow and disconnected operations.

To continue its goal to provide enhanced yet, simplified mission command collaboration capabilities, PM MC developed a rich web client solution called Command Post Web.

CP Web converges all warfighting function capabilities to allow users access to applications, or widgets, over the Internet instead of through software installed on a computer. CP Web uses the National Security Agency's Ozone widget

framework, a government-owned product, also used by Defense Information Systems Agency for joint service requirements, that allows the Army and third-party developers to develop and field widgets specific to the mission through a web-based marketplace. Similar to the "App Store" on an iPhone, developers can create applications, based on a pre-defined set of rules. Following successful beta launches in Afghanistan and Germany, CP Web and several widgets are part of CS 13.

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(U.S. Army photo by Claire Heninger)

A Soldier from the 3rd Brigade Combat Team, 10th Mountain Division uses Capability Set 13 equipment at Fort Drum, N.Y., in October 2012. Through mobile communications technology that connects all echelons of a BCT down to the dismounted Soldier, the Army's new CS 13 network will reduce units' reliance on fixed infrastructure, extend the range of communications and improve battlefield awareness at the lowest levels.

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"The benefit to Command Post Web is its flexibility," said LTC Thomas Bentzel, the Army's product manager for Tactical Mission Command, assigned to PM MC. "You can go to the website, pull up your widget or widgets, and see your data on a map, chart or table. It provides a window into the Common Operating Picture to Soldiers who don't have CPOF."

The new and/or enhanced operational widgets scheduled for release in CS 13 include the Maneuver Widget, which receives and integrates data from all other Mission Command systems that contribute to the COP. It produces a 2-D display of the COP for the commander and staff's tactical situational awareness and provides that COP data to the Map Widget for a 3-D display.

The Fires Command and Control widget allows the user to create, edit and delete geometries and plot them on the map, work with target lists and air support lists, send air support requests, send a "check fire" message to stop fire on targets, view active mission status and perform a "what If" analysis on a target.

PEO Aviation and PEO Missiles and Space are providing capabilities for the air picture through Ozone widgets. The new Sustainment/Logistics Asset Visibility widget extends Battle Command Sustainment and Support Systems capabilities via the new Log Reporting Tool, Combat Power, In-Transit Visibility, Asset Visibility and Unit Task Organization widgets.

CS 13 is also the launching point for the next technological progression towards enhancing

mission command collaboration, and it is coming by way of cloud technology. The Army has approved a set of computing technologies called the Common Operating Environment, enabling secure, interoperable and rapid application development across several defined computing environments. One of these environments is the Command Post Computing Environment, under which a partnership between PM MC and PM Defense Common Ground System - Army is converging operations and intelligence data via widgets to provide the commander with three-dimensional views for operational and intelligence awareness for ground and air reporting, field artillery commands, logistics, alerts and incident reporting.

"As we continue to develop COE, the software will provide more than an integrated Common Operational Picture for the Commander," COL Vogelhut said.

"Through bringing together multiple software systems into one environment, we gain efficiencies initially through hardware reductions, and eventually gain effectiveness through reduced training burdens and more robust information that allow Soldiers to execute enhanced mission operations."

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(U.S. Army photo by Claire Heninger)

A Soldier from the 2nd Brigade, 1st Armored Division uses Nett Warrior during the Army's Network Integration Evaluation 13.1 in October 2012.
Nett Warrior leverages commercial smartphone technology to provide an integrated dismounted leader situational awareness system for use during combat operations.

ACRONYM QuickScan

BCS3 - Battle Command Sustainment and Support Systems
COP - Common Operating Picture
CP CE - Command Post Computing Environment
CP Web - Command Post Web
CPOF - Command Post of the Future

DCGS-A - Defense Common Ground System - Army
DISA - Defense Information Systems Agency
NSA - National Security Agency
PM MC - PM Mission Command